

Remarks

Introduction

This response is submitted in reply to the outstanding Office Action mailed January 23, 2009.

Claim 6 was objected to because of the following informality: "receive + transmit" should be written in clear language to prevent any ambiguity that may arise.

Claims 3, 10, 14 and 20 were objected to under 37 C.F.R. § 1.75(c) as being of improper dependent form for failing to further limit the subject matter of a previous claim.

Claim 17 was rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention.

Claims 1, 3-4, 7-8, 10-12, 14-15, 17-18 and 20-21 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Publication No. 2001/0021176 ("Mimura") in view of common knowledge in the art.

Claims 2, 5-6, 9, 13, 16 and 19 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Mimura in view of common knowledge in the art and in further view of U.S. Patent Publication No. 2002/0105911 ("Pruthi").

Claims 1-15 and 17-21 have been amended. The amendments are fully supported by the originally filed specification and add no new subject matter. See, for example, step S32 of Figs. 10 and 17 and the corresponding paragraphs of applicants' originally filed specification.

Applicants respectfully traverse the rejections. In light of the remarks and amendments presented below, applicants respectfully request reconsideration and allowance of all the pending claims, namely claims 1-21.

Applicants' Response to the Examiner's Claim Construction

In claims 1-3, 7, 12-14 and 17, the Examiner construed the term "packet data separator" to refer to "Ethernet separator 510" as shown in figures 4 and 5. While applicants agree that the claimed "packet data separator" includes Ethernet separator 510, applicants also note for the record that "packet data separator" is not limited to Ethernet separator 510. Other examples of the claimed "packet data separator" discussed in applicants' specification include Ethernet

separator 510 of figures 6-8, Ethernet separator 810 of figure 12, Ethernet separators 1310 and 1320 of figures 13-16, and packet separator 2510 of figures 20 and 21.

The Examiner asserts that, “The portion of claim 6 following ‘statistics data include’ recites nonfunctional descriptive material and do not impose any particular functional requirement for the claimed analyzer, and therefore do not limit the claim. (see MPEP § 2106(II) and § 2111.04).”

However, applicants would like to point out that claim 6 depends on claims 5 and 1. Therefore, claim 6 includes the features recited in claims 5 and 1.

Accordingly, the portion of claim 6 that follows “statistics data include” adds patentable requirements to the functionality of the traffic analyzer discussed in claims 5 and 1. In particular, claim 6, as amended, requires the statistics reference unit to provide real-time statistics data, analyzed by the traffic analyzer, that include “communication amounts of receive data, transmit data, and receive and transmit data, access trials for each layer, a number of success times, a number of failure times, and current states, and further include usage statistics for each IP on each application, successful access rate statistics for each service, statistics on response times, and successful rate statistics on a PPP session for each base station.” Analyzing and providing each of these different pieces of data requires unique functionality.

Applicants kindly request that all of claim 6 be given patentable weight and be fully considered by the Examiner.

Applicants’ Response to the Claim Objections

Claim 6 was objected to because of the following informalities: “receive + transmit” should be written in clear language to prevent any ambiguity that may arise. Applicants have amended claim 6 to recite “receive and transmit” instead of “receive + transmit.”

Claims 3, 10, 14, and 20 were objected to 37 C.F.R. § 1.75(c) as being of improper dependent form for failing to further limit the subject matter of a previous claim.

Claims 3 and 14, as amended, recites “the traffic analyzer separates the user packet data received through the packet data separator into transmit data and receive data, and analyzes the transmit data and the receive data.” The Examiner asserts that this is essentially the same as what is recited in claims 1 and 12, respectively. However, applicants would like to point out that the traffic analyzer in claims 1 and 12 are “for separating” and that the actual action of separating

is not claimed until claim 3 and 14. While the “transmission directions” recited by claims 1 and 12 can include the “transmit” and receive” directions, two previously unclaimed types of packet data (i.e., “transmit data” and “receive data”) are introduced in claims 3 and 14. For at least these reasons, claims 3 and 14 are of proper dependent form.

Similar to the discussion above, although the “transmission directions” recited by claims 8 and 18 can include the “transmit” and the “receive” directions, two unclaimed types of packet data (i.e., “transmit data” and “receive data”) are introduced in claims 10 and 20. For at least these reasons, claims 10 and 20 are of proper dependent form.

Applicants’ Response to the 35 U.S.C. § 112 Rejections

Claim 17 was rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which application regards as the invention. Claim 17 recited the “method of claim 12,” which lacked sufficient antecedent basis. Applicants have amended claim 17 to recite the “device of claim 12” instead of “method of claim 12”. Accordingly, amended claim 17 particularly points out and distinctly claims the subject matter which applicants regard as the invention. Applicants request that the rejections under 35 U.S.C. § 112, second paragraph, be withdrawn.

Applicants’ Response to the 35 U.S.C. § 103(a) Rejections of the Independent Claims

Introduction

Independent claims 1, 8, 12 and 18 are currently pending and were rejected under 35 U.S.C. § 103(a) as being unpatentable over Mimura in view of common knowledge in the art.

Claim 1, as amended, recites a packet data separator that facilitates providing a wireless data service by a service server. The packet data separator is configured to separate user packet data transmitted between the service server and a mobile communication exchange or a packet controller. As amended, claim 1 now recites that the packet data separator is also configured to receive the user packet data after an RP registration is provided. Support for this feature can be found in applicants’ originally filed specification at, for example, step S32 of Figs. 10 and 17. Claim 1 also recites a traffic analyzer, statistics storage unit and statistics reference unit, as well as functionality provided by each.

Independent claims 8, 12 and 18 are similar to claim 1 and have also been amended to recite the receiving of the user packet data occurs “after an RP registration is provided.”

It was not obvious to one of ordinary skill to use Mimura’s switch in a mobile network

Mimura suggests a “packet switch [that] identifies a communication flow carried across an IP network, observes the communication flow, and acquires statistics data thereof, such as the number of packets that passed through the switch, the number of discarded packets, time at which the packets arrived at the switch, and time at which the packets were sent out from the switch.” Mimura, abstract.

The Examiner acknowledges that Mimura fails to suggest “that its switch, which analyzes data packets in an IP network, is used to analyze packet data traffic provided between one of a mobile communication exchange and a packet controller that provide wireless data service to the subscriber, and the service server.” Office Action, page 7. To fill this deficiency of Mimura, the Examiner says, “it would have been obvious to the person having ordinary skill in the art, at the time the invention was made to have used Mimura’s switch which is capable of analyzing data packet traffic in any kind of IP network, in order to gather information useful for network, financial, or billing management” Office Action, page 7.

Applicants’ respectfully disagree. One of ordinary skill in the art, at the time applicants’ invention was made, would have believed that the statistics provided by IP switching hubs would not have been sufficient for analyzing mobile communication statistics. In fact, the background of applicants’ specification specifically points out that:

Analysis of the packet data traffic in the above-configured IP network depends on the statistics provided by the IWF, the PDSN 40, an S/H (*switching hub*) which is an IP instrument, or a router, but the statistics are insufficient for analyzing various types of packet data traffic since the statistics provide restricted statistical information to the user for the proper maximum performance of systems.

Applicants’ specification, paragraph [0010] (emphasis added). In other words, IP network switches that were known by those of *ordinary* skill in the art at the time of applicants’ invention, like Mimura’s switches, were insufficient for analyzing mobile communications’ packet data traffic.

Mimura fails to make obvious each feature of applicants' amended independent claims

While applicants believe the remarks above are sufficient to show that it would not be obvious to one of ordinary skill in the art to use Mimura's switch in a mobile communications network, to expedite allowance of this case, applicants have amended the independent claims. In particular, the independent claims now recite the packet data separator is configured to receive the user packet data after an RP registration is provided. Therefore, even if the Examiner does not find applicants' remarks above (or below) persuasive, there is nothing in Mimura that suggests a "packet data separator configured to: ... receive the user packet data after an RP registration is provided," as required by claim 1. (Independent claims 8, 12, and 18 recite similar features.)

Moreover, it would not be obvious to one of ordinary skill in the art to configure Mimura's switch to receive user packet data after an RP registration is provided, because Mimura's switch is configured to acquire statistics of an IP network – not a mobile communications network.

Summary of responses to rejections of independent claims under 35 U.S.C. § 103(a)

For at least these reasons, Mimura fails to render independent claims 1, 8, 12 and 18 unpatentable. Thus the rejections of independent claims 1, 8, 12 and 18 should be withdrawn and the claims should be allowed.

Reply to Rejections of Dependent Claims 2-7, 9-11, 13-17 and 19-21

For at least the foregoing reasons, independent claims 1, 9, 12 and 18 are patentable and, since claims 2-7, 9-11, 13-17 and 19-21 depend from and necessarily include all of the recitations of one of independent claims 1, 9, 12 and 18, the cited documents, whether taken alone or in combination, do not teach or suggest the system and methods of claims 1, 9, 12 and 18 for at least the same reasons as described above in conjunction with the respective independent claims. ("If an independent claim is nonobvious under 35 U.S.C. § 103, then any claim depending therefrom is nonobvious." *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); MPEP § 2143.) Accordingly, it is therefore submitted that the 35 U.S.C. § 103(a) rejections of claims 2-7, 9-11, 13-17 and 19-21 have been overcome.

Conclusion

In view of the remarks presented above, applicants submit that the present application is in condition for allowance. As such, the issuance of a Notice of Allowance is therefore respectfully requested. In order to expedite the examination of the present application, the Examiner is encouraged to contact applicants' undersigned attorney in order to resolve any remaining issues.

It is believed that no additional petitions or fees are required other than those provided for in the related papers being filed herewith. The papers accompanying this Reply authorize the payment of the necessary fees. However, in the event that any extension of time and/or other fees are necessary to allow consideration of this Reply, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.

Respectfully submitted,



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